

### REMARKS

This communication responds to the Office Action mailed on May 31, 2006. Claims 7 and 14 are amended, no claims are canceled, and claims 21-25 are added. As a result, claims 1-25 are now pending in this Application. Claim 7 is amended to correct a typographical error, and not for reasons related to patentability.

### Miscellaneous

It is respectfully noted that the Attorney Docket Number shown on the face of the Office Action should be updated. The Examiner is respectfully requested to change the docket number to "2051.007US1", and the Applicant gratefully acknowledges the efforts of the Examiner in this regard.

### §101 Rejection of the Claims

Claims 14-19 are rejected under 35 USC 101 because the Office asserts descriptive materials are not capable of causing functional change in a computer. The Applicant respectfully traverses this rejection because the Office has not made out a *prima facie* case with respect to non-statutory subject matter.

A behavioral description, especially as implemented according to claims 16 and 17 (reciting a description compatible with various types of hardware description languages) is used to direct simulators with respect to modeling the behavior of the described device. Further information regarding behavioral descriptions, such as a hardware description language, may be obtained by consulting the *IEEE Standard VHDL Language Reference Manual*, Draft IEEE P1076/D3.0, June 20, 2006 (Revision of IEEE Std 1076-2002), The Institute of Electrical and Electronics Engineers, Inc., 2006. In fact, the VHDL language has many different types of instructions, including procedure calls, conditions, trigger events, etc., being derived from ADA, a high-level programming language originally developed by the United States Department of Defense. As is the case with ADA, VHDL may undergo analysis and elaboration, which is analogous to compiling and linking, prior to execution. Some simulators transparently combine

these operations. For example, the following text is taken directly from the IEEE VHDL Standard:

In order to execute a model, the design hierarchy defining the model must first be elaborated. Initialization of nets (see 12.6.2) in the model then occurs. Finally, simulation of the model proceeds. Simulation consists of the repetitive execution of the simulation cycle, during which processes are executed and nets updated. ... The elaboration of a design hierarchy creates a collection of processes interconnected by nets; this collection of processes and nets can then be executed to simulate the behavior of the design. At the beginning of the elaboration of a design hierarchy, every registered and enabled `vhpiCbStartOfElaboration` callback is executed. Once the elaboration of a given design hierarchy is complete, every registered and enabled `vhpiCbEndOfElaboration` callback is executed. *Id.* at pg. 193.

Claim 14 has been amended in order to recite the function of a behavioral level description, well known to those of skill in the art, to clarify that the description includes “information to cause a simulator to model behavior of the RFID circuit”. This amendment has been made to resolve an interpretive difference between the Office and the Applicant, and not for reasons related to patentability. No new matter has been added.

As noted in the Guidelines for examination, “If the examiner determines that the claim does not entail the transformation of an article, then the examiner shall review the claim to determine if the claim provides a practical application that produces a useful, tangible and concrete result. In determining whether the claim is for a ‘practical application,’ the focus is not on whether the steps taken to achieve a particular result are useful, tangible and concrete, but rather that the final result achieved by the claimed invention is ‘useful, tangible and concrete.’” *AT&T*, 172 F.3d at 1358-59, 50 USPQ2d at 1452. *Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility* (hereinafter, the “Guidelines”), pg. 20, October 2005.

Further, “[i]n many instances it is clear within which of the enumerated categories a claimed invention falls. Even if the characterization of the claimed invention is not clear, this is usually not an issue that will preclude making an accurate and correct assessment with respect to the section 101 analysis. The scope of 35 U.S.C. § 101 is the same regardless of the form or

category of invention in which a particular claim is drafted. AT&T, 172 F.3d at 1357, 50 USPQ2d at 1451. See also State Street, 149 F.3d at 1375, 47 USPQ2d at 1602 wherein the Federal Circuit explained

The question of whether a claim encompasses statutory subject matter should not focus on which of the four categories of subject matter a claim is directed to -- process, machine, manufacture, or composition of matter -- [provided the subject matter falls into at least one category of statutory subject matter] but rather on the essential characteristics of the subject matter, in particular, its practical utility.” *Id.* at pg. 15, October 2005.

In addition, it is respectfully noted that “[w]hile abstract ideas, natural phenomena, and laws of nature are not eligible for patenting, methods and products employing abstract ideas, natural phenomena, and laws of nature to perform a real-world function may well be. In evaluating whether a claim meets the requirements of section 101, the claim must be considered as a whole to determine whether it is for a particular application of an abstract idea, natural phenomenon, or law of nature, rather than for the abstract idea, natural phenomenon, or law of nature itself.” *Id.* at pgs. 17-18.

With respect to the Applicant’s claims 14-19, it is respectfully noted that providing a machine-readable medium is **useful**, i.e. “(i) specific, (ii) substantial and (iii) credible ...” [*Id.* at pg. 20] (e.g., providing a behavioral model in a machine-readable medium is useful for simulating the operation of an RFID circuit, and “[i]f the applicant has asserted that the claimed invention is useful for any particular practical purpose (i.e., it has a ‘specific and substantial utility’) and the assertion would be considered credible by a person of ordinary skill in the art, do not impose a rejection based on lack of utility.” M.P.E.P. § 2107.I).

Providing a behavioral model in a machine-readable medium is also **tangible**, being a mechanism for the efficient transfer of information to a computer. Finally, providing the model in a machine-readable medium is also **concrete**, since simulation results arising therefrom are substantially repeatable. Therefore, claims 14-19 constitute patentable subject matter, and the Applicant respectfully requests that the Office reconsider and withdraw the rejection of these claims under 35 U.S.C. § 101.

§112 Rejection of the Claims

Claims 14-19 were rejected under 35 U.S.C. § 112, second paragraph, for indefiniteness and for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In response, the Applicant respectfully notes that no *prima facie* case of indefiniteness has been established, and therefore, the Applicant respectfully traverses this rejection.

“In rejecting a claim under the second paragraph of 35 USC 112, it is incumbent on the examiner to establish that one of ordinary skill in the pertinent art, when reading the claims in light of the supporting specification, would not have been able to ascertain with a reasonable degree of precision and particularity the particular area set out and circumscribed by the claims.” Patent Prosecution: Practice and Procedure Before the U.S. Patent Office, Irah H. Donner, pg. 1137 (3<sup>rd</sup> Ed. 2003), citing *Ex parte Wu*, 10 USPQ2d 2031, 2033 (B.P.A.I. 1989) (citing *In re Moore*, 169 USPQ 236 (C.C.P.A. 1971); *In re Hammack*, 166 USPQ 204 (C.C.P.A. 1970)). Thus, it is noted that “[i]n relation to Section 112, second paragraph, the Examiner has the burden of showing that the proposed claim language is indefinite to one of skill in the art ...” and therefore, that any such rejection should exhibit the following to establish a *prima facie* case of indefiniteness: “interpretation of the claim in light of the specification; interpretation of the claim as one of ordinary skill in the art would interpret it; and that the limitations in the claim, or the subject matter not in the claim, does not reasonably define the invention.” *See Id.* at 1137 and 1139. This type of showing has not been made.

For example, the Office asserts with respect to claims 14-19 that “it is not clear whether it is the description of the RFID circuit or the RFID circuit [that has been] claimed ... the description of what is stored on the machine readable medium is not in the claim, only the description of the RFID circuit is claimed.” First, as noted in a previous response, it is clear that it is the “machine-readable medium” storing a behavioral level description of an RFID circuit that is claimed. Second, the assertions by the Office do not serve to show how the claim would be interpreted in light of the specification, how one of ordinary skill in the art would interpret the claim, and that the alleged (a) lack of structure or (b) insufficiency of the language would thereby fail to reasonably define the invention.

Thus, one of ordinary skill in the pertinent art, when reading the claims in light of the supporting specification, would be able to ascertain with precision and particularity the claimed subject matter, including the behavioral level description of the RFID circuit. The fact that the recited circuit is described at the behavioral level does nothing to render the claimed invention indefinite. Therefore, since no *prima facie* case of indefiniteness has been established, reconsideration and withdrawal of the rejection of claims 14-19 under 35 USC § 112, second paragraph, is respectfully requested.

### §103 Rejection of the Claims

Claims 1, 5-7, 11-13, and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicant's Admitted Prior Art (hereinafter "AAPA") in view of Hornsby et al. (U.S. 6,553,209; hereinafter "Hornsby") in view of Roesner et al. (U.S. 5,583,819; hereinafter "Roesner"). First, the Applicant does not admit that Hornsby or Roesner are prior art and reserves the right to swear behind these references in the future. Second, since a *prima facie* case of obviousness has not been established as required by M.P.E.P. § 2142, the Applicant respectfully traverses these rejections.

The Examiner has the burden under 35 U.S.C. §103 to establish a *prima facie* case of obviousness. *In re Fine*, 837 F.2d 1071, 1074, 5 U.S.P.Q.2d (BNA) 1596, 1598 (Fed. Cir. 1988). In combining prior art references to construct a *prima facie* case, the Examiner must show some objective teaching in the prior art or some knowledge generally available to one of ordinary skill in the art that would lead an individual to combine the relevant teaching of the references. *Id.* The M.P.E.P. contains explicit direction to the Examiner that agrees with the *In re Fine* court:

In order for the Examiner to establish a *prima facie* case of obviousness, three base criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on Appellant's disclosure. M.P.E.P. § 2142 (citing *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d (BNA) 1438 (Fed. Cir. 1991)).

An invention can be obvious even though the suggestion to combine prior art teachings is not found in a specific reference. *In re Oetiker*, 977 F.2d 1443, 24 U.S.P.Q.2d (BNA) 1443 (Fed. Cir. 1992). However, while it is not necessary that the cited references or prior art specifically suggest making the combination, there must be some teaching somewhere which provides the suggestion or motivation to combine prior art teachings and applies that combination to solve the same or similar problem which the claimed invention addresses. One of ordinary skill in the art will be presumed to know of any such teaching. (See, e.g., *In re Nilssen*, 851 F.2d 1401, 1403, 7 U.S.P.Q.2d 1500, 1502 (Fed. Cir. 1988) and *In re Wood*, 599 F.2d 1032, 1037, 202 U.S.P.Q. 171, 174 (C.C.P.A. 1979)). The requirement of a suggestion or motivation to combine references in a *prima facie* case of obviousness is emphasized in the Federal Circuit opinion, *In re Sang Su Lee*, 277 F.3d 1338; 61 U.S.P.Q.2D 1430 (Fed. Cir. 2002), which notes that the motivation must be supported by evidence in the record.

No proper *prima facie* case of obviousness has been established because there is no motivation to combine the references, and combining the references provides no reasonable expectation of success. Each of these points will be explained in detail, as follows.

**There is No Motivation to Combine The References.** With respect to independent claims 1, 7, 13, and 20, and as admitted by the Office, the AAPA is “silent on teaching the modulator clock is generated using a first oscillator, the demodulator clock is generated using a second oscillator.” It is asserted by the Office that Hornsby, in FIG. 2, teaches the use of first and second oscillators 80, 82 to generate modulator and demodulator clocks, and that “it would have been obvious ... for the modulator clock to [be] generated using a first oscillator, the demodulator clock [to be] generated using a second oscillator ... because using a separate oscillator to generate the clock for the modulator and demodulator enables the RFID device to transmit and receive signal at the optimum frequencies ...”.

First, there is no evidence in the record that such motivation exists. Therefore, the Examiner appears to be using personal knowledge to make this assertion, and is thus respectfully requested to submit an affidavit as required by 37 C.F.R. § 1.104(d)(2).

Second, this proposal ignores the fact that the AAPA teaches away from this combination. Even when single-oscillator arrangements, are used, concerns may arise over

whether "...they tend to be bulky, and high-power consumers" or "the provision of extra power ... as well as the extra chip area requirements ...". AAPA, paras. [0003] and [0004]. Adding a second oscillator goes directly against both of these concerns expressly recited by the AAPA.

The test for obviousness under ' 103 must take into consideration the invention as a whole; that is, one must consider the particular problem solved by the combination of elements that define the invention. *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1143, 227 U.S.P.Q. 543, 551 (Fed. Cir. 1985). References must be considered in their entirety, including parts that teach away from the claims. *See* MPEP § 2141.02. The fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 16 USPQ2d 1430 (Fed. Cir. 1990); M.P.E.P. § 2143.01.

Like the AAPA, Roesner also teaches using a single oscillator 34 in an RFID tag that "operates at approximately at the carrier frequency o the input signal or some multiple thereof." Roesner, Col. 11, lines 5-6. All timing in the applications disclosed by Roesner make use of this single oscillator in an RFID tag. *See* Roesner, Col. 11, line 42 – Col. 12, line 27.

Therefore, since the AAPA and Roesner teach away from the use of two oscillators, there is no motivation to combine either the AAPA or Roesner with Hornsby, and a *prima facie* case of obviousness has not been established. It is respectfully noted that any claim that depends from a nonobvious independent claim is also nonobvious under 35 USC § 103. *See* M.P.E.P. § 2143.03. Therefore, claims 2-6, 8-12, and 15-19 are also nonobvious.

**Combining the References Provides No Reasonable Expectation of Success.** Modifying the AAPA with the non-volatile memory of Roesner would not lead one of ordinary skill to a reasonable expectation of success. Neither would modifying the AAPA using the teachings of Hornsby. This is because any combination including the AAPA or Roesner must necessarily include only one oscillator. Therefore, the suggested combination does not provide a reasonable expectation that a circuit including two oscillators would result.

In summary, there is no motivation to combine the references (in fact, the AAPA and Roesner both teach away from the suggested modification by Hornsby), and no reasonable expectation of success results from their combination. The requirements of M.P.E.P. § 2142 have not been satisfied, and a *prima facie* case of obviousness has not been established. It is

therefore respectfully requested that the rejections to claims 1, 5-7, 11-13, and 20 under 35 U.S.C. § 103 be reconsidered and withdrawn.

Allowable Subject Matter

Claims 2-4 and 8-10 were objected to as being dependent upon a rejected base claim, but were indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. However, since it is believed that claims 2-4 and 8-10 are in condition for allowance in their present form, the Applicant respectfully declines to amend them at this time.

CONCLUSION

The Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone the Applicant's attorney at 210-308-5677 to facilitate prosecution of this Application. If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop AF, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 24 day of July, 2006.

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